FOR.A ®

INNOVATIONS IN VIDEO
and AUDIO TECHNOLOGY

OPERATION MANUAL

MV-410HS Live Viewer

Version 2.0 – higher

FOR-A COMPANY LIMITED

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Trademark

1. Setup

1-1. Overview

MV-410HS Multi viewer is enabled to transmit videos to PC by the connection through a network. Use this MV-410HS Live Viewer to verify the transmitted videos.

1-2. System Requirements

To install MV-410HS Live Viewer, your computer must meet the following requirements.

OS	Windows® XP operating system SP2 or later Professional (32-bit)	Windows® 7 operating system Professional (32/64-bit)
CPU	Pentium® 4 processor 1.3 GHz or faster	Intel® Core™2 Duo processor 2 GHz or faster
Memory	512 MB or more	2 GB or more
Display	Resolution of 1024 x 768pixels or better Must be capable of full color (24-bit) display	
Network port	Ethernet, at least one port 100BASE-TX/1000BASE-T	
Network cable	100BASE-TX: Category 5 or better 1000BASE-T : Category 6, or enhanced category 5	
Software	Microsoft® .NET Framework 2.0 (Supplied on the CD-ROM) Windows® Installer 3.1 (Supplied on the CD-ROM) Visual C++® 2005 Redistributable (Supplied on the CD-ROM)	

1-3. Installing MV-410HS Live Viewer

(1) Load the supplied Installation CD-ROM into the PC, and open the CD-ROM drive. Run the file **"setup.exe"** to start the setup wizard.

Double-click

setup.exe
Setup

(2) If [.NET Framework 2.0] is not installed on your PC, the screen shown below is displayed. Click **Accept**. If [.NET Framework 2.0] is already installed on your PC, this screen is not displayed.

MV-410HS Live Viewer Setup

For the following components:

.NET Framework 2.0

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MICROSOFT SOFTWARE SUPPLEMENTAL LICENSE TERMS
MICROSOFT .NET FRAMEWORK 2.0
MICROSOFT WINDOWS INSTALLER 2.0
MICROSOFT WINDOWS INSTALLER 3.1
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Do you accept the terms of the pending License Agreement?

If you choose Don't Accept, install will close. To install you must accept this agreement.

Accept   Don't Accept

(3) If [Windows Installer 3.1] is not installed on your PC, the screen shown below is displayed. Click **Accept**. If [Windows Installer 3.1] is already installed on your PC, this screen is not displayed.
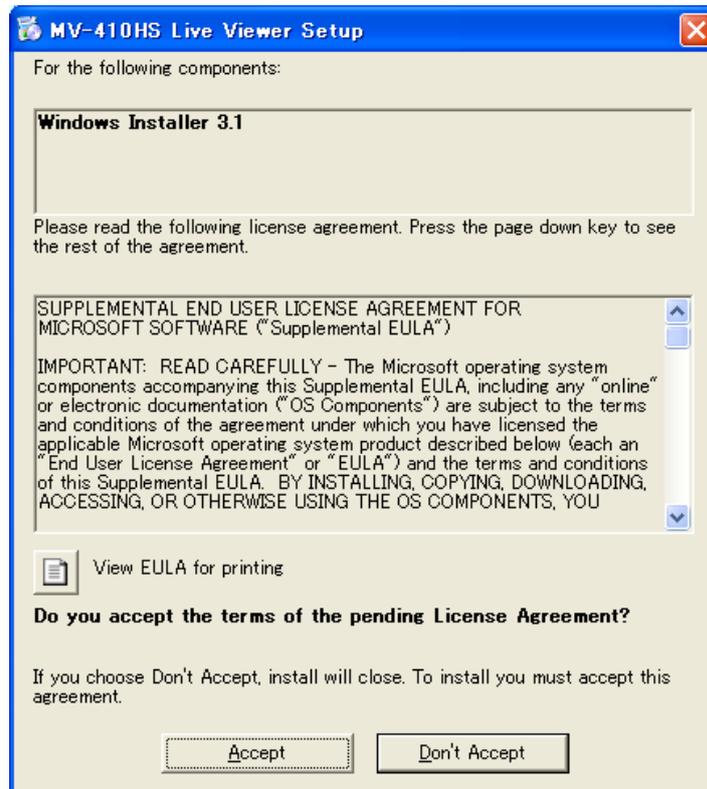
(4) The confirmation dialog for installing Visual C++ Runtime Libraries appears. Click **Install**.
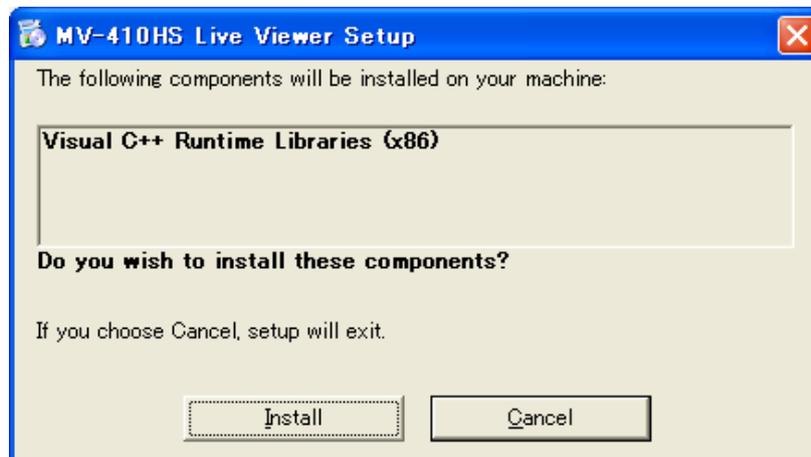
(5) If [.NET Framework 2.0] is not installed, the installation starts.
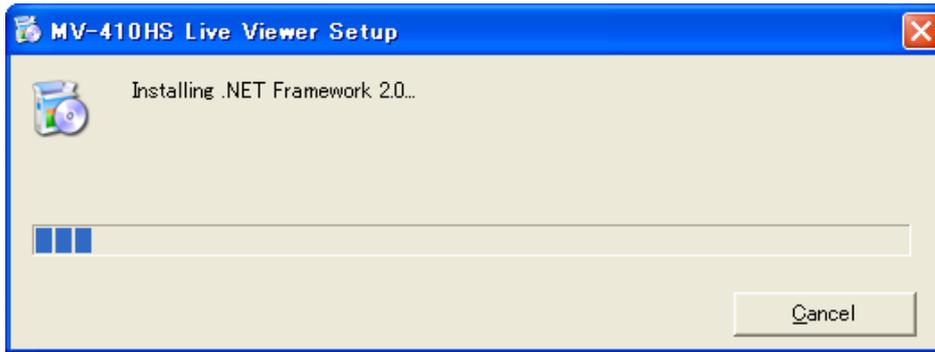
(6) When installation of [.NET Framework 2.0] is complete, the screen shown below is displayed requiring a reboot. Click **Yes** to reboot your PC.
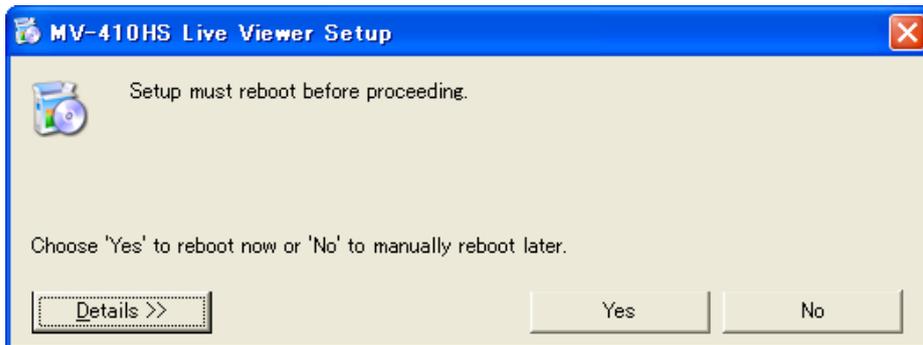
(7) After the setup wizard is started, click **Next**.

Live Viewer

(8) Select the installation directory. It is not necessary to change the folder. Select whether to install MV-410HS Layout Editor for current user only or for all users. When the settings are completed, click **NEXT>**.
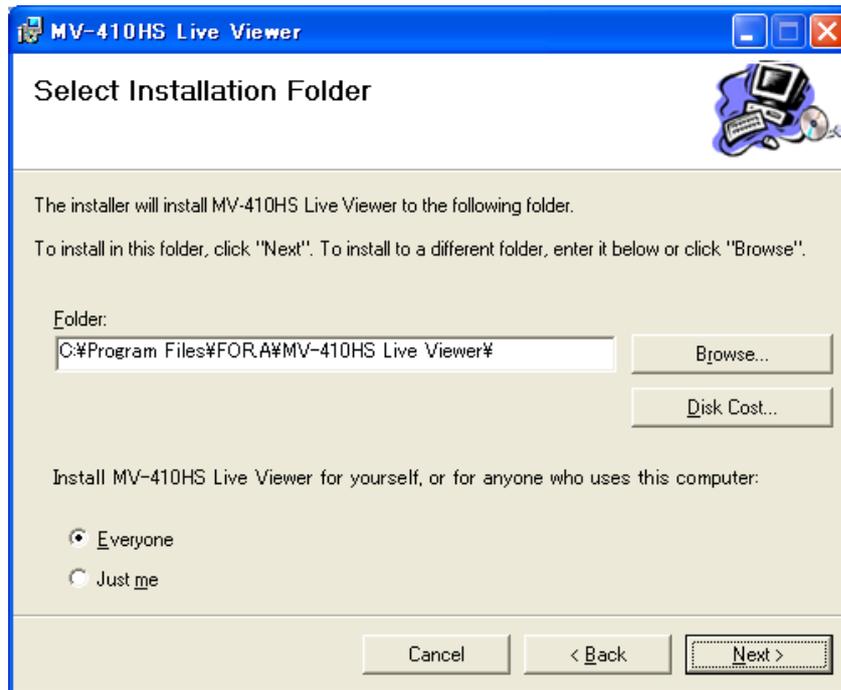
(9) Click **NEXT>** to start the installation.
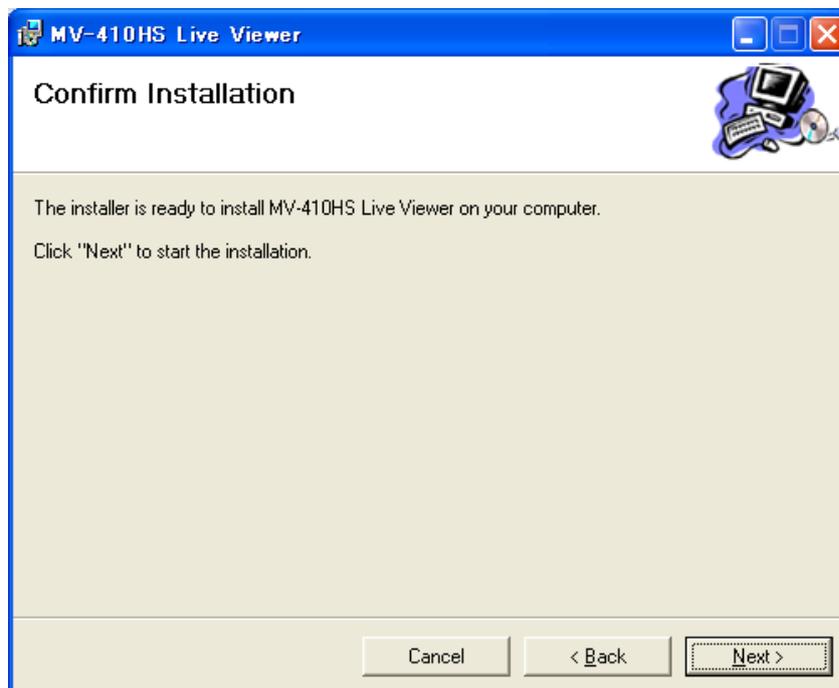
(10) When installation is completed normally, the screen shown below is displayed. Click **Close** to quit the setup wizard.
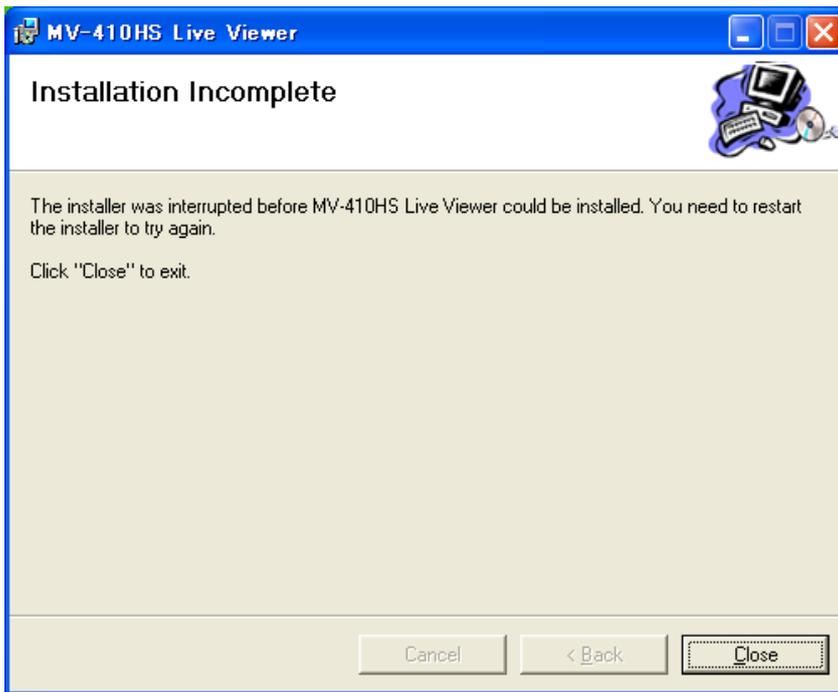
1-4. Removing MV-410HS Live Viewer

To remove MV-410HS Live Viewer, follow the procedure below.

1) Go to **Start > Control Panel**. In the **Add or Remove Programs** window, select **"MV-410HS Live Viewer"**, and click **Remove**.
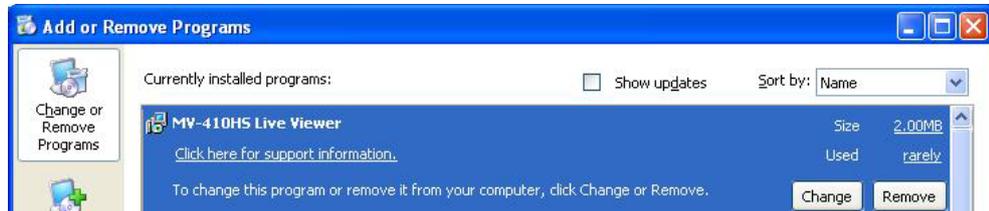
2) The confirmation dialog shown below is displayed. Click **Yes** to start the uninstallation.
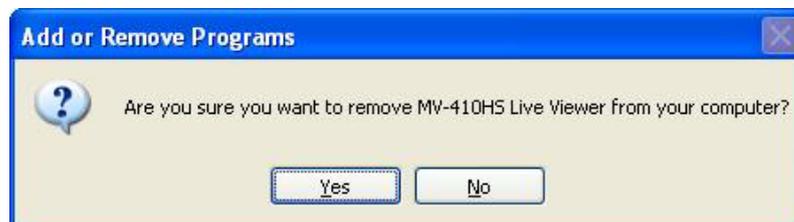
The "Windows Installer 3.1", "Microsoft .NET Framework 2.0", and "Microsoft Visual C++2005 Redistributable" do not need to be removed.

1-5. Connections

To control MV-410HS over a LAN interface, be aware that the cables and equipment used vary depending on the connection method. Use a crossover LAN cable to connect the computer directly to the MV-410HS. Use a straight through LAN cable for the connection using a router or a hub.

IMPORTANT
In UNICAST mode, the connection with one PC is available for one MV-410HS.

1-6. Communication Standard

The communication standards for serial control over a LAN interface is as follows.

Protocol	TCP/IP Protocol
IP address	Setting range: 0.0.0.0 ～255.255.255.255 However, there also are limitations on IP addresses set by the PC as shown below. Set the IP address in this range. $$\boxed{192} \ . \ \boxed{168} \ . \ \boxed{0} \ . \ \boxed{1}$$ 1st octet 2nd octet 3rd octet 4th octet 1st octet: 1 to 223 (except 127) 2nd octet: 0 to 255 3rd octet: 0 to 255 4th octet: 1 to 254 * This is set in the menu screen on the main unit. * The default setting is 192.168.0.1.
Subnet mask length	Setting range: 0 to 31 * This is set in the menu screen on the main unit. * The default setting is 24.
Gateway	Setting range: 0.0.0.0 to 255.255.255.255 * This is set in the menu screen on the main unit. * The value 0.0.0.0 signifies that the gateway has not been set. * The default setting is 0.0.0.0.
MAC address	This is already set at factory shipping (cannot be changed). * The setting can be confirmed in the menu screen on the main unit.
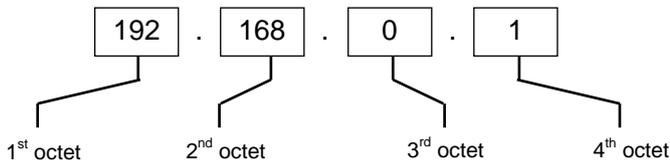
IMPORTANT

You cannot change the LAN communication standard settings for MV-410HS main unit from PC. The changes can be made on MV-410HS main unit. See MV-410HS Operation Manual, section 7-3. "LAN" for details.

1-7. PC Network Settings

The PC network settings need to match that of the MV-410HS. The procedure for making the network settings at the PC vary depending on the OS, so refer to the OS manual for details. This setting example shows the case when connecting to the MV-410HS with the default settings. The MV-410HS default settings are shown below.

IP address	192. 168. 0.1
Subnet mask length	24
Gateway	0.0.0.0

1) Setting in Windows XP with the default Start menu setting
Click **Start** on the taskbar, open [**Control Panel**], and double-click "**Network Connections**". Right-click "**Local Area Connection**" icon to open [**Properties**] window. Double-clicking "**Internet Protocol (TCP/IP)**" under the [**General**] tab opens the [**Internet Protocol (TCP/IP) Properties**] window. Make the settings as shown in the example below. Make a note of the settings before changing them in case you need to return the IP address to its original settings later.
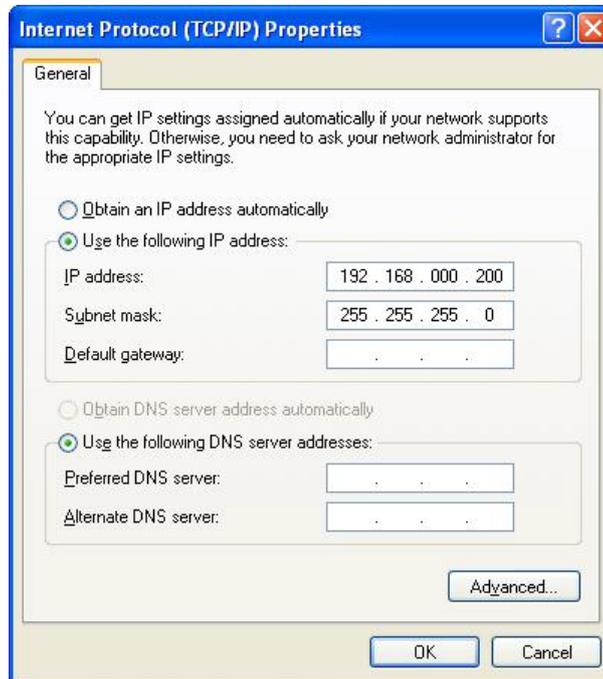
IP address for PC	192.168.0.yyy (yyy is any number from 2 to 254 except for the number set for the MV-410HS unit and the gateway number. In this example, the setting is yyy=200.)
Subnet mask	Set to 255.255.255.0.

2) Setting in Windows XP with the Start menu setting changed to Classic
Click **Start** on the taskbar, select "**Settings**" → "**Network Connections**" and then right-click the "**Local Area Connection**" icon to open [**Properties**] window. Double-clicking "**Internet Protocol (TCP/IP)**" under the [**General**] tab opens the [**Internet Protocol (TCP/IP) Properties**] window. The settings are then made in the same way as 1) above.

When the settings are completed, click **OK**, and then close all setting windows.

2. Video Transmission using Live Viewer

2-1. Starting and Exiting MV-410HS Live Viewer

To start MV-410HS Live Viewer, go to **Start > Programs > FOR.A** and select **"Live Viewer"**. The Controller dialog shown below is displayed.
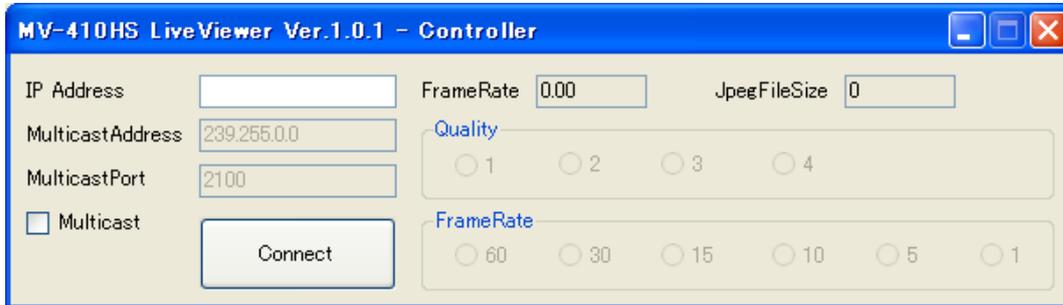
1) **To connect in Unicast Mode**
   Enter the IP address of the MV-410HS to be connected in the IP address box, and then click **CONNECT**.

If ID is set, the authentication window shown below is displayed.
* If ID is not set , the Viewer screen opens.
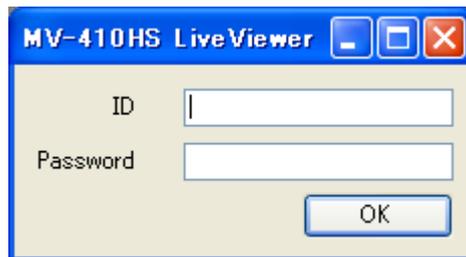
Enter ID and password and click OK. When the entered ID and password match the stored data, the Viewer screen opens.
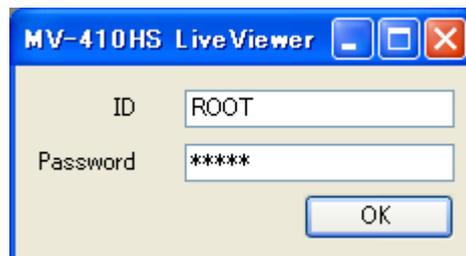
The default settings on MV-410HS are as follows.
   ID: ROOT
   Password: 00000

2) To connect in Multicast Mode
Put a check in the Multicast check box, and enter the Multicast address and Multicast port of the MV-410HS to be connected.
Click **CONNECT**. When the connection is established, the Viewer screen is displayed.

IMPORTANT
Due to the UDP protocol used in MULTICAST mode, the video output may not be updated at the packet loss which occurs under the unstable network condition.

2-2. Closing Connection and MV-410HS Live Viewer

To close the communication with the MV-410HS, click ☒ at the top-right corner of the Viewer screen. To exit the MV410HS Live Viewer, click ☒ at the top-right corner of the control window.

2-3. MV-410HS Live Viewer - Controller

6)   7)

1)
2)
3)
4)
5)

8)
9)
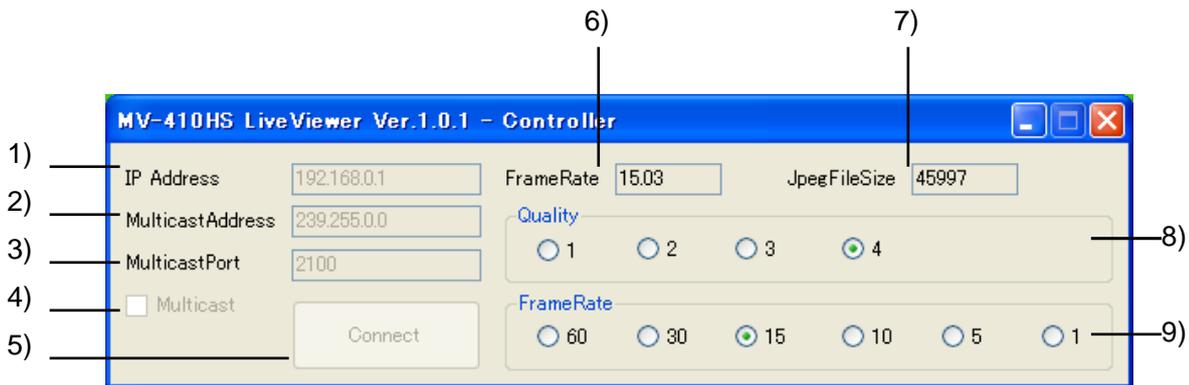
1)   IP Addres
     Displays the IP address of the connected MV-410HS. To change the connection with MV-410HS, close the Viewer screen, enter the IP address, and then click **Connect** again.

2)   Multicast Address
     Displays the Multicast address of the connected MV-410HS. To change the Multicast address to connect to, close the Viewer screen, enter the Multicast address and then click **Connect** again.

3)   Multicast Port
     Displays the Multicast port of the connected MV-410HS. To change the Multicast port to connect to, close the Viewer screen, enter the Multicast port and then click **Connect** again.

4)   Multicast
     Selects whether to connect in Unicast mode or Multicast mode.
     Unchecked: Connects in Unicast mode.
     Checked: Connects in Multicast mode.

5)   Connect
     Establishes the connection with the MV-410HS specified by the IP Address and opens the Viewer screen.

6)   Frame Rate
     Measures and displays the actual frame rate.

7)   Jpeg File Size
     Displays the file size of the transmitted video image in Bytes.

8)   Quality
     Selects the compression rate for the JPEG image to transmit from 1 to 4. The larger number provides higher resolution.

9)   Frame Rate
     Selects the frame rate for the video image transmission.
     When the output frequency of MV-410HS is set to 60Hz or 59.94Hz, frame rate of 1FPS, 5FPS, 10FPS, 15FPS, 30FPS, and 60FPS are available.
     When the output frequency of MV-410HS is set to 50Hz, frame rate of 1FPS, 4FPS, 8FPS, 12FPS, 25FPS, and 50FPS are available.

IMPORTANT

The sufficient frame rate may not be obtained due to the transmitted video images, JPEG compression ratio, specifications of the connected PC, network environment, and other factors. If It occurs, change the JPEG compression ratio to reduce the data volume being transmitted
If the MV-410HS is connected in Multicast mode, settings of QUALITY and FRAME RATE cannot be changed. To change the settings, change the connection to Unicast mode.
Although settings for any of the followings are changed using Layout Editor, RS-232C/422/485/LAN command, or Web Browser while displaying MV-410HS Live Viewer screen, the parameter display on the Live Viewer - Controller dialog will not be updated .
      - Output frequency
      - JPEG compression ratio
      - Frame rate

2-4. MV-410HS Live Viewer - Viewer Screen
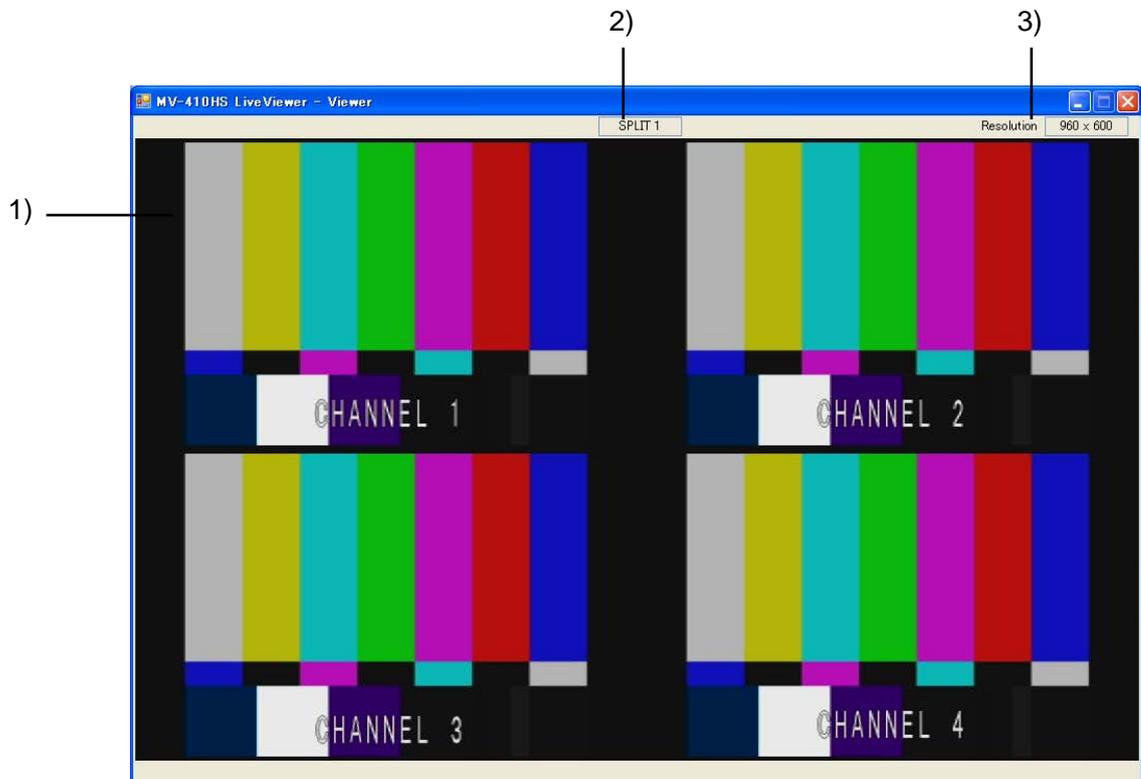
1) Image Display Area
   Displays the image transmitted from MV-410HS. The MV-410HS compresses the image data output from DVI OUT connector into both horizontally and vertically half size JPEG format and transmit the data.

2) Output Screen
   Displays the output screen type selected on MV-410HS.

3) Resolution
   Displays the resolution of the image transmitted from MV-410HS.

3. Troubleshooting

If any of the following problems occur during operation of your MV-410HS Live Viewer, proceed as indicated below to see if the problem can be corrected before assuming unit malfunction has occurred.

IMPORTANT
If the problem is not corrected by processing the actions below, power off the unit and power on again. If it does not correct the problem either, contact your dealer.

Problem	Check	Action
MV-410HS Live Viewer does not start.	Does the PC meet the operating environment conditions?	Start with a PC that meets the operating environment conditions.
	Is other software currently running?	There may be a conflict with another software program. Close all other programs, and then start the MV-410HS Live Viewer again.
The connection with MV-410HS cannot be established.	Is the MV-410HS turned on?	Check the MV-410HS is turned on.
	Is the network connected correctly?	Check that the network wires and cables are connected properly.
		Check that the cable type is correct.
	Are the LAN adapter and other hardware operating properly?	Use the device manager or diagnostic program to check if the hardware is operating properly.
		Check that the drivers are installed correctly.
	Were the PC network settings made correctly?	Check that the TCP/IP protocol is installed and that the IP address and other settings are correct.
	Were the MV-410HS network setting made correctly?	From the MV-410HS menu, check that the IP address and other settings are correct.
	Is the same IP address being used?	Check that no IP addresses are duplicated among all PCs and MV-410HS units in the network.
	Is the network mode set correctly?	Check that the MV-410HS network mode matches to that of the MV-410HS Live Viewer.